# Claims

[c1]   What is claimed is:

1.A welding–type power source comprising:

a power source housing;

an internal combustion engine driven power source ar-
ranged in the power source housing to supply electrical
power;

an energy storage device in rechargeable association
with the internal combustion engine driven power source
and arranged to provide welding–type power for at least
a given period.

[c2]   2.The welding–type power source of claim 1 further
comprising a controller configured to switch an electrical
configuration of the welding–type power source to de-
liver power from one of the internal combustion engine
driven power source and the energy storage device to
provide welding–type power.

[c3]   3.The welding–type power source of claim 2 wherein the
controller is configured to drive a welding–type process
from the energy storage device and switch the electrical
configuration of the welding–type power source to drive
the welding–type process from the internal combustion

engine driven power source upon detecting full engine and generator operation.

[c4]   4. The welding-type power source of claim 3 wherein the internal combustion engine driven power source is configured to charge the energy storage device intermittently during the welding-type process.

[c5]   5. The welding-type power source of claim 3 wherein the internal combustion engine driven power source is configured to charge the energy storage device intermittently not during the welding-type process.

[c6]   6. The welding-type power source of claim 2 wherein the controller is configured to switch an electrical configuration of the welding-type apparatus to power a welding-type process from the energy storage device during a first operational period and from the internal combustion engine driven power source during a second operational period.

[c7]   7. The welding-type power source of claim 6 wherein the first operational period is a startup period of the internal combustion engine driven power source and wherein the second operational period is a post-startup period of the internal combustion engine driven power source.

[c8]   8. The welding-type power source of claim 6 wherein the

controller is configured to automatically switch the electrical configuration of the welding-type apparatus without interrupting a power supplied by the welding-type power source to drive a welding-type process.

[c9]    9. The welding-type power source of claim 1 wherein the internal combustion engine driven power source is configured to provide a charging power to the energy storage device.

[c10]    10. The welding-type power source of claim 9 wherein the internal combustion engine driven power source is configured to also provide welding-type power to drive a welding-type process.

[c11]    11. The welding-type power source of claim 9 wherein the internal combustion engine driven power source is configured to exclusively deliver the charging power to the energy storage device.

[c12]    12. The welding-type power source of claim 1 further comprising a sensor configured to detect a signal delivered by the internal combustion engine driven power source and provide feedback to a controller configured to control an electrical configuration of the welding-type power source.

[c13]    13. The welding-type power source of claim 12 wherein

the controller is configured to switch the electrical configuration of the welding-type power source to deliver power from the internal combustion engine driven power source upon receiving a signal from the sensor indicative of post-startup engine operation.

[c14]   14. The welding-type power source of claim 1 wherein the internal combustion engine driven power source is configured to deliver a charging power to the energy storage device during operation of the internal combustion engine driven power source.

[c15]   15. The welding-type power source of claim 1 wherein the energy storage device is configured to drive a welding-type process and the internal combustion engine driven power source is configured to charge the energy storage device.

[c16]   16. A method of performing a welding-type process comprising the steps of:
initiating a welding-type process from an energy storage device;
starting a fossil fuel driven engine power source; and
upon completion of starting the fossil fuel driven engine power source, switching the welding-type process from the energy storage device to the fossil fuel driven engine power source.

[c17]  17.The method of claim 16 wherein the step of initiating the welding-type process from the energy storage device and the step of starting of the fossil fuel driven engine power source occur substantially simultaneously.

[c18]  18.The method of claim 16 further comprising the step of charging the energy storage device from the fossil fuel driven engine power source.

[c19]  19.The method of claim 18 wherein the step of charging the energy storage device is performed when the welding-type process is not operating.

[c20]  20.The method of claim 16 further comprising the step of detecting a signal provided by the fossil fuel driven engine power source to determine completion of the startup process.

[c21]  21.The method of claim 16 further comprising the steps of monitoring the welding-type process and upon detecting a break in the welding-type process, disabling the fossil fuel driven engine power source.

[c22]  22.A welding-type apparatus comprising:
a welding-type apparatus housing;
an engine driven power source configured to supply electrical power and arranged substantially within the

welding-type apparatus housing;

an energy storage device connected to the engine driven power source and configured to supply power for a welding-type process alternately with the engine driven power source.

[c23] 23. The apparatus of claim 22 further comprising a power source controller configured to selectively drive a welding-type process from at least one of the engine driven power source and the energy storage device.

[c24] 24. The apparatus of claim 23 wherein the power source controller is configured to switch an electrical configuration of the welding-type apparatus to drive the welding-type process from the energy storage device during an initialization period and from the engine driven power source during a post-initialization period.

[c25] 25. The apparatus of claim 24 wherein the initialization period includes an engine start-up period of the engine driven power source.

[c26] 26. The apparatus of claim 24 wherein the power source controller is configured to automatically switch the electrical configuration of the welding-type apparatus without interrupting the welding-type process.

[c27] 27. The apparatus of claim 23 further comprising a sen-

sor configured to detect a signal indicative of an output delivered by the engine driven power source.

[c28]    28. The apparatus of claim 27 wherein the power source controller is configured to receive feedback from the sensor and to switch an electrical configuration of the welding-type apparatus to drive the welding-type process from the engine driven power source upon receiving feedback from the sensor.

[c29]    29. The apparatus of claim 23 wherein the engine driven power source includes an engine configured to drive a generator during operation and wherein the power source controller is configured to cease operation of the engine upon detecting a break in the welding-type process.

[c30]    30. The apparatus of claim 29 wherein the engine driven power source is configured to supply electrical power to deliver a charging power to the energy storage device during operation of the engine.

[c31]    31. The apparatus of claim 23 wherein the power source controller is configured to drive the welding-type process from the energy storage device and to switch an electrical configuration of the welding-type apparatus to drive the welding-type process from the engine driven

power source upon detecting a voltage drop of the energy storage device below a threshold.

[c32]  32. The apparatus of claim 23 wherein the welding-type process is one of a metal inert gas (MIG) welding-type process, tungsten inert gas (TIG) welding-type process, a shielded metal arc welding (SMAW) welding-type process, a plasma-cutting process, an induction heating process, and an aircraft auxiliary charging process.

[c33]  33. The apparatus of claim 22 wherein the engine driven power source is configured to charge the energy storage device during a break in the welding-type process.

[c34]  34. The apparatus of claim 22 wherein the energy storage device is configured to drive a welding-type process and the engine driven power source is configured to charge the energy storage device.

[c35]  35. The apparatus of claim 21 wherein the engine driven power source and energy storage device are configured to deliver auxiliary power.

[c36]  36. A welding-type power source comprising:
a housing;
a generator disposed in the housing and configured to deliver a welding-type power; and
an energy storage device rechargeably connected to the

generator and configured to deliver welding-type power over a given duration.

[c37] 37. The welding-type power source of claim 36 wherein the generator is further configured to deliver an auxiliary power.

[c38] 38. The welding-type power source of claim 36 wherein the generator is configured to deliver the welding-type power upon an expiration of the given duration.

[c39] 39. The welding-type power source of claim 38 wherein the given duration corresponds to a duration of a welding-type process.

[c40] 40. The welding-type power source of claim 36 wherein the generator and the energy storage device are configured to deliver welding-type power substantially simultaneously upon initiation of a welding-type process.

[c41] 41. The welding-type power source of claim 36 wherein the energy storage device is disposed within the housing.

[c42] 42. The welding-type power source of claim 36 further comprising a controller configured to switch an electrical configuration of the welding-type power source to deliver power from one of the generator and the energy

storage device to provide welding-type power.